

Claims

1. Aqueous liquid detergent composition comprising:
 - a. from 0.1 to 70% by weight (wt%) of one or more anionic surfactant selected among anionic ester of alkylpolyglycosides having general formula:
$$[R-O-(G)_x]_n-(D)_y \quad (I)$$
wherein:

R is an aliphatic group, saturated or unsaturated, linear or branched, having from 6 to 20 atoms of carbon, preferably from 8 to 16 atoms of carbon;

G is a residue of a reducing saccharide, preferably of glucose, connected to R-O by means of an ethereal O-glycosidic bond;

O is an oxygen atom;

D is an acyl residue of sulfosuccinic acid or of a carboxylic acid selected from the group consisting of citric, tartaric, maleic and malic acid, connected to an oxygen atom of G;

n is a number between 1 and m-1, where m is the number of carboxylic groups in the acid that originates D;

x is a number from 1 to 10, representing the average degree of oligomerization of G;

y is a number from 1 to 10 representing the degree of average esterification of $(G)_x$;
 - b. from 0.05 to 10 wt% of an enzyme selected in the group consisting of proteases, amylases, lipases, cellulases and mixture thereof;
 - c. from 10 to 95 wt% of water.
2. Aqueous liquid detergent composition according to claim 1., comprising from 10 to 30 wt% of anionic surfactant having general formula (I).
3. Aqueous liquid detergent composition according to claim 1., comprising from 0.10 to 5 wt% of one or more enzymes of point b.
4. Aqueous liquid detergent composition according to claim 1., comprising from 20 to 70 wt% of water.
5. Aqueous liquid detergent composition according to any of the preceding claims, further comprising from 0.1 to 50 %wt of one or more anionic surfactants having general formula different from (I), in amount not exceeding the amount of the surfactants having general formula (I).

6. Aqueous liquid detergent composition according to claim 5., comprising from 10 to 30 %wt of one or more anionic surfactants having general formula different from (I).
7. Aqueous liquid detergent composition according to claim 6., where the anionic surfactants having general formula different from (I) are chosen among linear or branched C₉-C₁₅ alkylsulfate, linear or branched C₉-C₁₅ alkylbenzenesulfonates, C₈-C₂₄ polyethoxylated alkyl ether sulfates containing from 1 to 20 ethoxylic groups.
8. Procedure for the preparation of aqueous liquid detergent compositions comprising the following steps, (wt% are referred to the final composition):
 - A. from 0.1 to 70 wt%, preferably from 10 to 30 wt%, of one or more anionic surfactants selected among anionic ester of alkylpolyglycosides having general formula:
$$[R-O-(G)_x]_n-(D)_y \quad (I)$$
wherein:

R is an aliphatic group, saturated or unsaturated, linear or branched, having from 6 to 20 atoms of carbon, preferably from 8 to 16 atoms of carbon;

G is a residue of a reducing saccharide, preferably of glucose, connected to R-O by means of an ethereal O-glycosidic bond;

O is an oxygen atom;

D is an acyl residue of sulfosuccinic acid or of a carboxylic acid selected from the group consisting of citric, tartaric, maleic and malic acid, connected to an oxygen atom of G;

n is a number between 1 and m-1, where m is the number of carboxylic groups in the acid that originates D;

x is a number from 1 to 10, representing the average degree of oligomerization of G;

y is a number from 1 to 10 representing the degree of average esterification of (G)_x
 - are mixed with from 10 to 95 wt%, preferably from 20 to 70 wt%, of water, under stirring;
 - B. the mixture is stirred for 10-30 minutes at a temperature of 15-30°C, and the pH is adjusted to 4-8;
 - C. from 0.05 to 10 wt% of an enzyme selected in the group consisting of

proteases, amylases, lipases, cellulases and mixture thereof is added while stirring.

9. Procedure for the preparation of aqueous liquid detergent compositions according to claim 8., wherein in step A. from 10 to 30 wt% of a mixture of anionic surfactant having general formula (I) are mixed with from 10 to 95 wt% of water.
10. Procedure for the preparation of aqueous liquid detergent compositions according to claim 8., wherein in step C. from 0.1 to 5 wt% of an enzyme selected in the group consisting of proteases, amylases, lipases, cellulases and mixture thereof is added while stirring.
11. Procedure for the preparation of aqueous liquid detergent compositions according to any of claims from 8. to 10., wherein after step A. from 0.1 to 50 wt% of one or more anionic surfactants having general formula different from (I) are added while stirring to the obtained mixture, said anionic surfactants being added in an amount not exceeding the amount of the surfactant having general formula (I).
12. Procedure for the preparation of aqueous liquid detergent compositions according to claim 11., wherein from 10 to 30 wt% of the anionic surfactants having general formula different from (I) are added.
13. Procedure for the preparation of aqueous liquid detergent compositions according to claim 12., wherein the anionic surfactants having general formula different from (I) are chosen among linear or branched C₉-C₁₅ alkylsulfate, linear or branched C₉-C₁₅ alkylbenzenesulfonates, C₈-C₂₄ polyethoxylated alkyl ether sulfates containing from 1 to 20 ethoxylic groups.